

PATENT COOPERATION TREATY

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KEIL & SCHAAFHAUSEN
PATENTANWÄLTE

04. Okt. 2004

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference O 1 P 102 WO	FOR FURTHER ACTION	
International application No. PCT/EP2004/007153	International filing date (day/month/year) 01/07/2004	(Earliest) Priority Date (day/month/year) 23/07/2003
Applicant OUTOKUMPU OYJ		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 5 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. **Certain claims were found unsearchable** (See Box II).

3. **Unity of invention is lacking** (see Box III).

4. With regard to the **title**,

the text is approved as submitted by the applicant.

the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

the text is approved as submitted by the applicant.

the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regards to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 1

as suggested by the applicant.

as selected by this Authority, because the applicant failed to suggest a figure.

as selected by this Authority, because this figure better characterizes the invention.

b. none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2004/007153A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C21C5/52

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 C21C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category ^o	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 477 195 B2 (BERGER HARALD ET AL) 5 November 2002 (2002-11-05) column 3, line 42 - column 3, line 51; claims 1,2; figure 1 -----	1,2,4,5, 7,10,13, 15,17
X	US 3 634 592 A (PANTKE HEINZ-DIETER ET AL) 11 January 1972 (1972-01-11) abstract; figure 1 -----	10, 13-18,21
X	FR 2 681 937 A (IRSID) 2 April 1993 (1993-04-02) abstract; figures 1,2 -----	10,13
A	DE 196 08 530 A (EISENBAU ESSEN GMBH) 14 August 1997 (1997-08-14) cited in the application the whole document -----	1-21 -/-

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

° Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

Date of the actual completion of the international search

Date of mailing of the international search report

15 September 2004

29/09/2004

Name and mailing address of the ISA

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Bergman, L

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 524 362 B1 (WELLS WILLIAM ET AL) 25 February 2003 (2003-02-25) the whole document -----	1-21
A	GB 1 226 593 A (METALLGESELLSCHAFT) 31 March 1971 (1971-03-31) cited in the application the whole document -----	1-21
A	FR 1 536 190 A (METALLGESELLSCHAFT AG THE STEE) 27 August 1968 (1968-08-27) the whole document -----	1-21
X	US 4 514 218 A (INAGAKI ETSUO) 30 April 1985 (1985-04-30)	10
A	the whole document -----	1
()	X GB 2 115 011 A (BRITISH STEEL CORP) 1 September 1983 (1983-09-01) abstract; figure 1 -----	10,13,14
A	US 3 385 494 A (THEMELIS NICKOLAS J ET AL) 28 May 1968 (1968-05-28) the whole document -----	1-21
A	US 5 611 838 A (FRITZ ERNST ET AL) 18 March 1997 (1997-03-18) the whole document -----	1-21
A	GB 1 193 527 A (KUTZNETZOV) 3 June 1970 (1970-06-03) the whole document -----	1-21
()		
2		

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/EP2004/007153

Patent document cited in search report	Publication date		Patent family member(s)	Publication date
US 6477195	B2	06-12-2001	AT 408663 B AT 9642000 A CA 2349060 A1 DE 10126356 A1 IT T020010509 A1 US 2001048707 A1	25-02-2002 15-06-2001 30-11-2001 06-12-2001 29-11-2002 06-12-2001
US 3634592	A	11-01-1972	DE 1953378 A1 AT 325084 B BE 755725 A1 CA 923179 A1 CH 549769 A ES 384021 A1 FR 2065880 A5 GB 1269617 A IL 35202 A JP 48034083 B LU 61637 A1 NL 7015190 A ,B NO 127519 B SE 353144 B ZA 7005847 A	06-05-1971 10-10-1975 15-02-1971 20-03-1973 31-05-1974 16-12-1972 06-08-1971 06-04-1972 14-03-1974 18-10-1973 01-12-1970 27-04-1971 02-07-1973 22-01-1973 28-04-1971
FR 2681937	A	02-04-1993	FR 2681937 A3	02-04-1993
DE 19608530	A	14-08-1997	DE 19608530 A1 DE 19608531 A1 DE 19608532 A1	14-08-1997 14-08-1997 14-08-1997
US 6524362	B1	25-02-2003	DE 19744151 A1 AT 209698 T AU 734802 B2 AU 1029199 A BR 9812880 A DE 59802271 D1 WO 9918245 A1 EP 1025267 A1 ES 2168801 T3 ID 28236 A JP 2001519473 T RU 2205233 C2 ZA 9809098 A	08-04-1999 15-12-2001 21-06-2001 27-04-1999 08-08-2000 10-01-2002 15-04-1999 09-08-2000 16-06-2002 10-05-2001 23-10-2001 27-05-2003 06-04-2000
GB 1226593	A	31-03-1971	BE 686409 A DE 1508222 A1 ES 353722 A2 FR 1536190 A GB 1104690 A MY 14270 A NL 6612226 A NO 118791 B SE 381062 B SE 370955 B US 3472649 A US 3472650 A	15-02-1967 09-10-1969 01-02-1970 27-08-1968 28-02-1968 31-12-1970 06-03-1967 16-02-1970 24-11-1975 04-11-1974 14-10-1969 14-10-1969
FR 1536190	A	27-08-1968	BE 686409 A DE 1508222 A1	15-02-1967 09-10-1969

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/EP2004/007153

Patent document cited in search report	Publication date	Patent family member(s)		Publication date
FR 1536190	A	ES	353722 A2	01-02-1970
		GB	1104690 A	28-02-1968
		GB	1226593 A	31-03-1971
		MY	14270 A	31-12-1970
		NL	6612226 A	06-03-1967
		NO	118791 B	16-02-1970
		SE	381062 B	24-11-1975
		SE	370955 B	04-11-1974
		US	3472649 A	14-10-1969
		US	3472650 A	14-10-1969
US 4514218	A	30-04-1985	NONE	
GB 2115011	A	01-09-1983	NONE	
US 3385494	A	28-05-1968	DE 1583194 A1	30-07-1970
			FR 1555626 A	31-01-1969
			GB 1188715 A	22-04-1970
US 5611838	A	18-03-1997	AT 400245 B	27-11-1995
			AT 249593 A	15-03-1995
			CA 2137766 A1	11-06-1995
			DE 59410379 D1	05-08-2004
			EP 0657549 A1	14-06-1995
GB 1193527	A	03-06-1970	NONE	